

ENERGY ABSORBING FRONT FRAME STRUCTURE FOR A VEHICLE

ABSTRACT OF THE DISCLOSURE

5

A method and apparatus for absorbing energy during a frontal collision of a vehicle, through the use of a front frame structure having main frame rails that include several deformable and non-deformable sections which are connected by selectively crushable junctures that are configured to predispose one or more of the junctures and sections to pivot selectively outward, rearward and upward, in a predetermined manner, during the collision. The front frame structure also includes an engine cradle, attached below the main frame rails, and having a pair of side rails that include forward and rear crushable junctures joined by non-deformable intermediate sections, with the crushable junctures of the main frame rails and engine cradle side rails being configured to predispose the intermediate sections of the engine cradle side rails to move downward and rearward during the collision.